

WHAT IS CLAIMED IS:

1. A carrier comprising:

a pair of flanges opposed to each other and designed to rotatably support rotating bodies between the flanges;

joints that connects the flanges, wherein:

the flanges and the joints are integrally formed through plastic deformation of a single material.

2. The carrier according to claim 1, wherein:

the joints are disposed along outer peripheries of the flanges.

3. The carrier according to claim 2, wherein:

openings are made in the joints.

4. The carrier according to claim 1, wherein:

a groove is formed on a border between the flanges and the joints.

5. The carrier according to claim 1, wherein:

through-holes opposed to each other and designed to penetrate the flanges are made on the inner circumferential side of the flanges.

6. The carrier according to claim 1, wherein:

engagement holes for engagement with rotational shafts for rotatably supporting rotating bodies in the carrier are

made in the flanges.

7. A method of manufacturing a carrier having a pair of flanges and rotatably supporting rotating bodies between the flanges, comprising the steps of:

forming a material into the shape of a cup having an opening; and

closing off the opening of the cup so that a pair of flanges opposed to each other and designed to rotatably support rotating bodies between the flanges and joints for connecting the flanges are integrally formed.

8. The method according to claim 7, wherein:

the material is selected from a plate material, a rod material and a tubular material.

9. The method according to claim 7, wherein:

a bending guide is formed on a border between pre-joints and pre-flanges before the material is closed off.

10. The method according to claim 9, wherein:

a groove is formed as the bending guide on a side of the border to which the flanges are opposed.

11. The method according to claim 7, wherein:

openings are made in pre-joints of the material before the material is closed off.

12. The method according to claim 11, wherein:  
mandrels are inserted from the openings made in the pre-joints of the material so as to close off the material.
13. The method according to claim 11, wherein:  
engagement holes for engagement with rotational shafts for rotatably supporting rotating bodies in the carrier are made in pre-flanges before the material is closed off.
14. The method according to claim 11, wherein:  
mandrels are interposed in positions for mounting rotating bodies between the flanges so that the flanges are swaged towards the mandrels.
15. The method according to claim 11, wherein:  
openings are made in the joints of the material after the material has been closed off.
16. The method according to claim 11, wherein:  
the material is selected from a plate material and a tubular material; and  
openings are made in the pre-joints of the material before the material is formed into the shape of a cup.
17. The method according to claim 11, wherein:  
the material is selected from a plate material and a tubular material; and

a bending guide is formed on a border between pre-joints and a pre-flange of the material before the material is formed into the shape of a cup.

18. The method according to claim 17, wherein:

a groove is formed as the bending guide on a side of the border to which the flanges are opposed.

19. The method according to claim 11, wherein:

a bottom of the material formed into the shape of the cup is turned into a first flange;

peripheral walls adjacent to the bottom are turned into joints; and

an opening-side portion of the cup-shaped material, which is to be closed off, is turned into a second flange.

20. A method of manufacturing a carrier having a pair of flanges and rotatably supporting rotating bodies between the flanges, comprising the steps of:

preparing a tubular material;

closing off both end openings of the tubular material so that a pair of flanges opposed to each other and designed to rotatably support rotating bodies between the flanges and joints for connecting the flanges are integrally formed.

21. The method according to claim 20, wherein:

a bending guide is formed on a border between pre-joints

and pre-flanges before the material is closed off.

22. The method according to claim 21, wherein:

a groove is formed as the bending guide inside the tube on the border.

23. The method according to claim 20, wherein:

openings are made in pre-joints of the material before the material is closed off.

24. The method according to claim 20, wherein:

mandrels are inserted from the openings made in the pre-joints of the material so as to close off the material.

25. The method according to claim 20, wherein:

engagement holes for engagement with rotational shafts for rotatably supporting rotating bodies in the carrier are made in pre-flanges before the material is closed off.

26. The method according to claim 20, wherein:

mandrels are interposed in positions for mounting rotating bodies between the flanges so that the flanges are swaged towards the mandrels.

27. The method according to claim 20, wherein:

axial centers of a side wall of the tubular material are turned into the joints; and

both axial ends of the side wall of the tubular material,

which are to be closed off, are turned into a pair of flanges.

28. A method of manufacturing a carrier having a pair of flanges and rotatably supporting rotating bodies between the flanges, comprising the steps of:

preparing a tubular material having a tubular wall surface;

bulging a wall surface at the axial center of the tubular material radially outwardly so that a pair of flanges opposed to each other and designed to rotatably support rotating bodies between the flanges and joints for connecting the flanges are integrally formed.

29. The method according to claim 28, wherein:

openings are made in pre-joints of the material before the material is closed off.

30. The method according to claim 28, wherein:

engagement holes for engagement with rotational shafts for rotatably supporting rotating bodies in the carrier are made in pre-flanges before the material is closed off.

31. The method according to claim 28, wherein:

mandrels are interposed in positions for mounting rotating bodies between the flanges so that the flanges are swaged towards the mandrels.

32. The method according to claim 28, wherein:

axial centers of the bulged side wall are turned into the joints; and

both axial ends of the side wall of the tubular material, which are to be closed off, are turned into a pair of flanges.